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proper motion affecting the tenths will have taken place since the angular separation of the stars amounted to a couple of minutes. It appears to me that such a system as that under consideration in the present paper may have originated from a star, or a system of two stars like α^1 and α^2 *Centauri*, with a large proper motion being brought, by reason of that large proper motion, sufficiently near another system to disturb the relative motions of each, and that both systems have thus been changed from close into open orbits. I consider that we now see each star moving with the common motion of the centre of gravity combined with the velocity due to its motion about the centre of gravity of the whole system, which latter velocity has for a long period past been sensibly an uniform velocity in a straight line. It would be interesting to examine the annual parallaxes of these stars.

1879, *October* 25.

Conjunction of Mars and Saturn, June 30, 1879, *observed at the Observatory, Melbourne.* By R. L. J. Ellery.

Observations with South Equatoreal, 8″ Aperture, and Parallel Wire Micrometer. Power 250.

Melbourne Mean Time.				Distance by Micrometer.	Distance, corrected, of Semi-diam.	Position of *Mars*.	
	h	m	s	″	″	°	′
June 30	16	25	33	113·19	110·50	294	37
		48	3	99·85	97·25	312	24
		58	19	94·99	92·39	322	24
	17	2	22	93·18	90·58	327	42
		6	37	91·28	88·68	331	12
		12	32	91·66	89·06	336	4
		14	12	90·52	87·92	338	7
		16	20	90·13	87·53	...	
		19	40	90·33	87·73	...	
		22	29	90·71	88·11	347	52
		24	41	91·47	88·87	...	
		27	0	91·47	88·87	...	
		28	25	92·23	87·63	354	2
		32	19	94·14	91·54	...	
		33	38	94·71	92·11	357	42
		35	35	95·85	93·25	359	22
		38	42	97·38	94·78	...	
		43	11	102·52	99·92	4	22

Remarks.—The measures having been made from south limb of *Mars* to south limb of *Saturn*, and the first column of distances corrected for wire zero only, a correction of −2″·60 for diff. of semi-diameter is applied, which gives the distances in second column. No correction for parallax or refraction has been applied.

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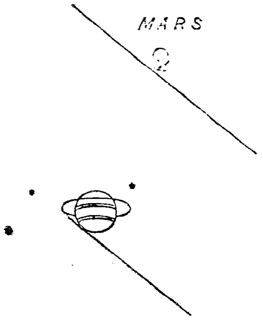
Observations by Mr. Ellery with the 8-inch Refractor.

Measures with Parallel-wire Micrometer, power 250.
Colour Comparison with negative eye-piece, 220.



Saturn.—Green yellow or *green cream colour*, sombre and dull in tone. *Divisions in ring* and *dark band* on body of planet well marked. Four satellites visible during first measures; but only three, as shown (two of which assumed to be *Titan* and *Rhea*), during the latter part of the observation.

Mars.—Very red-yellow, especially at terminator near North Pole. Greenish dark spot about centre of planet. *South Polar Ice Cap* like a bead of bright silver apparently projecting beyond the limb.

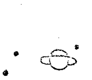
Colours of planets contrast strongly in the field of the telescope. *Saturn's* colour quite remarkable.

Measures were made from south (bright) limb of *Mars* to south limb of *Saturn*, and diameter of *Saturn's* ball measured (mean of 5 measures) 16″·1.

The sky was perfectly clear throughout the observations. Atmosphere quiet and steady; images sharp, well defined, and undisturbed.

Observations by Mr. Turner with the Great Telescope.

Saturn is of a pale greenish yellow tint.

Mars is a bright orange-red. Gibbous in shape, the bright limb of *Mars* being nearest to *Saturn*, thus: 

The illuminated limb of *Mars* is of a bright reddish yellow—the more central and far-off portions of a bright yellow without red. The North Pole of *Mars* is of a *bright* reddish yellow—the South Pole of a *very pale yellow*, or whitish yellow tone.

The colours of *Mars* are altogether *much more brilliant* than that of *Saturn*. *Saturn* has a dull sickly appearance, but *Mars* is bright and brilliant.

In the Finder the contrast of colour is, if anything, more striking than in the Great Telescope.

One dark band is seen on *Saturn*, below the ring, and three satellites, as shown above.

Sky beautifully clear, atmosphere steady, and altogether a splendid morning for such an observation.

Powers used 235 and 255.

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